

a plurality of heating assemblies each disposed within a corresponding heating compartment to heat that compartment and said at least one medical item contained in that compartment, wherein each said heating assembly includes:

a heating plate including a medical item support platform to receive and support at least one medical item thereon and to distribute heat within that compartment and to said at least one medical item contained therein;

a heater affixed and applying heat to said heating plate; and

a temperature sensor to measure a temperature of said heating plate; and

a controller to facilitate entry of desired temperatures for said heating compartments and to independently control a thermal output of each said heater to heat said at least one medical item contained within a corresponding compartment to said entered desired temperature associated with that compartment based on said temperature measured by a corresponding temperature sensor;

wherein said controller controls said heating assemblies to heat at least two of said compartments to different desired temperatures.

34. (New) A temperature control system for heating medical items to desired temperatures comprising:

a system housing;

a heating compartment disposed within said housing to receive at least one medical item;

a heating assembly disposed within said compartment to heat said compartment and said at least one medical item contained in said compartment, wherein said heating assembly includes:

a heating plate to receive said at least one medical item thereon and to distribute heat within said compartment and to said at least one medical item;

a heater affixed and applying heat to said heating plate; and

a temperature sensor to measure a temperature of said heating plate; and

a controller to facilitate entry of a desired temperature and to control a thermal output of said heater to heat at least one medical item to said entered desired temperature based on said temperature

measured by said temperature sensor;

wherein said heating plate includes at least one primary conducting wall and a plurality of secondary conducting walls, at least one of said at least one primary conducting wall and said secondary conducting walls includes a medical item support platform to support at least one medical item within said heating compartment, and said heater is attached to and covers a selected portion of said at least one primary conducting wall to directly apply heat to said selected portions; and

wherein at least one of said secondary conducting walls is coupled to said at least one primary conducting wall at a location separate from said selected portion and receives said applied heat through conduction from said at least one primary conducting wall.

35. (New) The temperature control system of claim 34, wherein said heating plate has a generally U-shaped configuration with a bottom conducting wall and side conducting walls extending from said bottom conducting wall, and said medical item support platform is disposed at said bottom conducting wall.

36. (New) The temperature control system of claim 34, wherein said controller enables said heater to heat said heating plate in response to said temperature measured by said temperature sensor being below said entered desired temperature and disables said heater in response to said temperature measured by said temperature sensor being at or exceeding said entered desired temperature.

37. (New) The temperature control system of claim 34, wherein said system includes a plurality of heating compartments each having a corresponding heating assembly, and wherein said controller facilitates entry of a plurality of desired temperatures each associated with a corresponding heating compartment, wherein said controller independently controls said heating assemblies to heat said compartments to their corresponding desired temperatures.

38. (New) The temperature control system of claim 34, further comprising:

a selectively configurable rack structure to partition said compartment into at least one receptacle for receiving said at least one medical item, wherein said rack structure facilitates even heat distribution within said compartment and to said at least one medical item placed therein.

39. (New) In a temperature control system having a system housing, a heating compartment disposed within the housing, a heating assembly disposed within the heating compartment and including a heating plate, a heater and a temperature sensor, and a controller for controlling the heating assembly, wherein said heating plate includes at least one primary conducting wall and a plurality of secondary conducting walls, a method of heating medical items to desired temperatures comprising the steps of:

- 38
- (a) receiving at least one medical item on said heating plate within said compartment;
 - (b) facilitating entry of a desired temperature for said compartment via said controller;
 - (c) applying heat directly to said at least one primary conducting wall of said heating plate via said heater attached to and covering a selected portion of said at least one primary conducting wall;
 - (d) conducting said applied heat from said at least one primary conducting wall to at least one secondary conducting wall coupled to said at least one primary conducting wall at a location separate from said selected portion to distribute heat in a substantially uniform manner to said at least one medical item disposed on said heating plate;
 - (e) measuring a temperature of said heating plate via said temperature sensor; and
 - (f) controlling a thermal output of said heater via said controller to heat said at least one medical item to said entered desired temperature based on said temperature measured by said temperature sensor.

40. (New) The method claim 39, wherein said heating plate has a generally U-shaped configuration with a bottom conducting wall and side conducting walls extending from said bottom

conducting wall, and said at least one primary conducting wall includes at least one of said bottom conducting and side conducting walls, and wherein step (d) further includes:

(d.1) conducting said applied heat from at least one of said bottom and side conducting walls via at least another of said bottom and side conducting walls to distribute heat in a substantially uniform manner to said at least one medical item disposed on said heating plate.

41. (New) The method of claim 39, wherein step (f) includes:

(f.1) enabling said heater to heat said heating plate in response to said temperature measured by said temperature sensor being below said entered desired temperature; and

(f.2) disabling said heater in response to said temperature measured by said temperature sensor being at or exceeding said entered desired temperature.

3a 42. (New) The method of claim 39, wherein said system includes a plurality of heating compartments each having a corresponding heating assembly, and step (a) further includes:

(a.1) receiving at least one medical item on said heating plates within said compartments;

step (b) further includes:

(b.1) facilitating entry of a plurality of desired temperatures each associated with a corresponding heating compartment;

step (c) further includes:

(c.1) applying heat directly to said at least one primary conducting wall of each of said heating plates via said corresponding heaters attached to and covering said selected portions of each of said at least one primary conducting wall;

step (d) further includes:

(d.1) conducting said applied heat from said at least one primary conducting wall of each of said heating plates to a corresponding at least one secondary conducting wall coupled to said at least one primary conducting wall at a location separate from a corresponding selected portion